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## METCALFE COUNTY

### (Metcalf County Water Service Area Map)

- Estimated 1999 population of 9,500--70% on public water
- Estimated 2020 population of 10,200--76% on public water
- 260 miles of water lines, with plans for 47 additional miles
- Estimated funding needs for public water 2000-2005--\$1,500,000
- Estimated funding needs for public water 2006-2020--\$253,000

Metcalf County had a population of 9,501 (3,952 households) in 1999 with a projected population of 10,200 (4,410 households) in 2020. Approximately 70% of the households have treated water available to them. 80% of those not on public water rely on private wells. About 275 new households will be placed on public water through line extensions in 2000-2020.

The expansion of water lines in Metcalf County has been limited because of the county's rolling topography and lack of funds. According to Greg White of the Edmonton Water Works, they could serve additional 275 customers. To meet current and future needs, projects have been selected and ranked by Edmonton Water Works representatives, elected officials and the Barren River ADD's Board of Directors as being crucial to the future growth and development of Metcalf County.

There may be a need to expand the capacity of the water system in the future. According to the Kentucky State Data Center, Metcalf County's population is expected to rise from 9,360 to 10,200 in 2020. This means Edmonton Water Works could gain an additional 500 households. With residential growth comes an increase in commercial and industrial activity. Because of this potential increase in the amount of demanded water, Edmonton Water Works may need to consider increasing the amount of water purchased from the Glasgow Water Company, inquire about purchasing water from the Green River Valley Water District, or construct their own water treatment plant.

Any major residential and commercial growth in Metcalf County is expected to occur along Kentucky Highway 80 from downtown Edmonton to the Cumberland Parkway Interchange.

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# WATER SERVICE AREAS

## METCALFE COUNTY

### Kentucky

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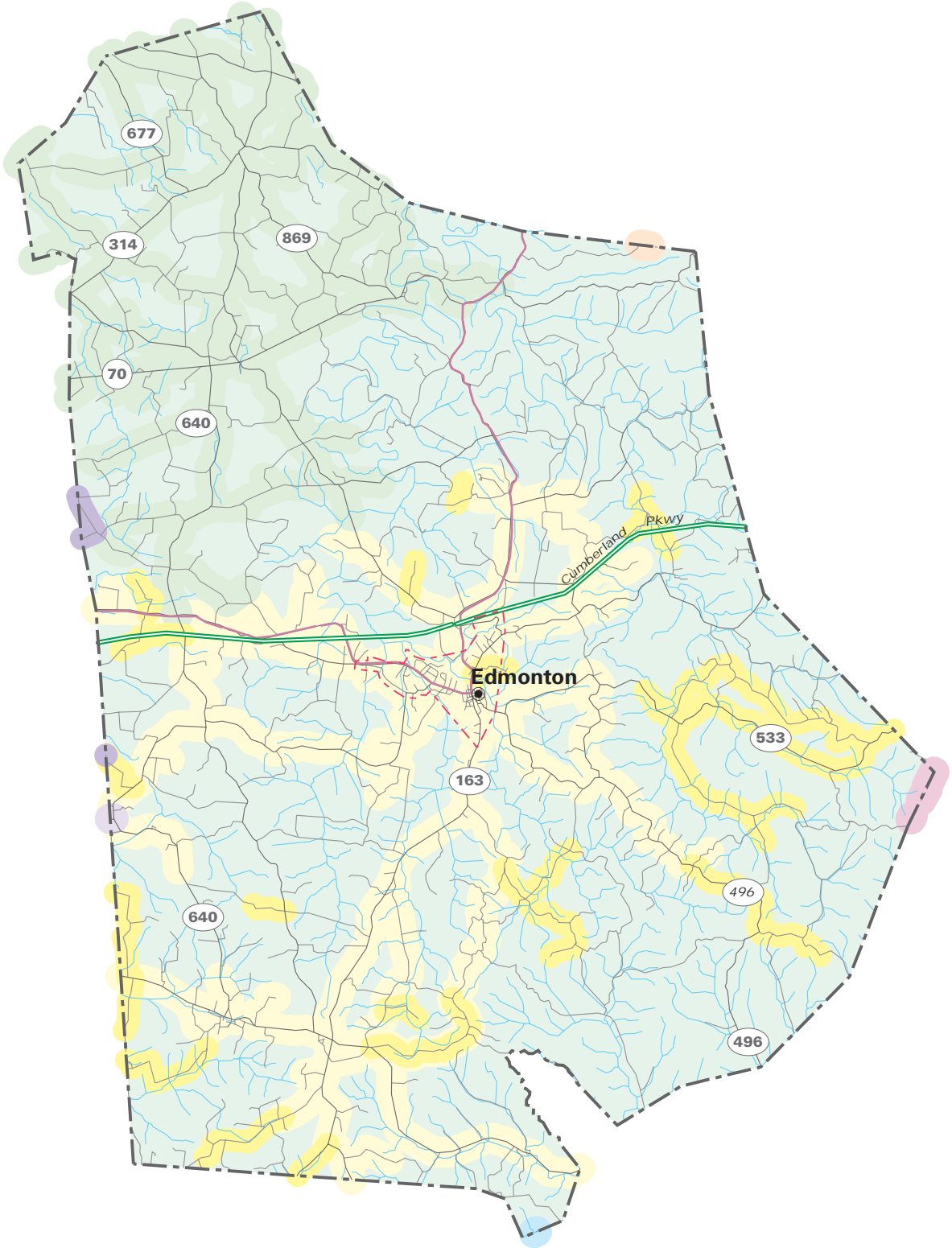
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#### WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		GREEN TAYLOR WATER DISTRICT
		GREEN RIVER VALLEY WATER DISTRICT
		GLASGOW WATER COMPANY
		EDMONTON WATER WORKS
		CUMBERLAND COUNTY WATER DISTRICT
		ADAIR COUNTY WATER DISTRICT

Edmonton Water Works is well prepared for this potential growth, already having a well-established infrastructure network in these areas.

***Estimated Costs - Proposed Projects, 2000-2005***

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
<b>METCALFE</b>								
CITY OF EDMONTON	40.8	228	1,500					1,500
<b>METCALFE COUNTY TOTAL</b>	<b>40.8</b>	<b>228</b>	<b>1,500</b>					<b>1,500</b>

***Estimated Costs - Proposed Projects, 2006-2020***

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
<b>METCALFE</b>								
CITY OF EDMONTON	5.4	Est. 35	253					253
<b>METCALFE COUNTY TOTAL</b>	<b>5.4</b>	<b>35</b>	<b>253</b>					<b>253</b>

**PUBLIC WATER SYSTEMS**

Two water districts currently supply water to the residents of Metcalfe County. These two systems are the Green River Valley Water District, which serves the northern portion of the county, and Edmonton Water Works, which serves the city of Edmonton and the southern portion of the county

**EDMONTON WATER WORKS**

PWSID:..... 0850115  
 System Type:..... COMMUNITY  
 Owner Type:..... MUNICIPAL  
 Surface Source:  
 Purchase Source:  
 Well Source:  
 Sells Water to:  
 Treatment Plant Capacity (MGD):..... 0.00  
 Percent Daily Average Production:..... 0.00  
 Total Tank Storage Capacity (gallons):..... 800,000.00  
 Total Service Connections: ..... 2,145.00  
 Number of Employees:..... 11.00  
 Treatment Operator Class: .....2D  
 Distribution Operator Class:  
 Customer Rate for 1,000 Gallons:..... 4.98  
 O/M costs 1997:..... Not available  
 O/M costs per Service Connection: ..... Not available  
 Net Revenue 1997:..... Not available  
 Total Water Produced 1997 (gallons):..... Not available  
 Water Sold 1997 (gallons):..... Not available  
 Unaccounted-for Water 1997 (%): ..... Not available

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Edmonton Water Works purchases all its water from the Glasgow Water Company. The water comes from the Barren River Reservoir, which is considered an adequate supply of raw water through 2015. Edmonton Water Works currently serves 1,930 residential customers, 205 commercial customers, and ten industrial customers. Their estimated daily water use is about 500,000 gallons. The Districts storage system consists of five tanks with a combined capacity of 800,000 gallons. The base rate for water is \$24.91 for 5,000 gallons, in the City of Edmonton and \$28.39 for 5,000 gallons outside of the city limits. Edmonton Water Works has 11 employees, of whom, two are certified to operate the distribution system.

### **GREEN RIVER VALLEY WATER DISTRICT**

The Green River Valley Water District gets its water from two primary sources, Rio Verde Spring and the Green River. Also, the Glasgow Water Company serves as a secondary source for the district. These sources are described in the Hart County Water Supply Plan as an adequate supply of raw water for future needs. The District currently serves 5,202 households in the District. Services are provided in five counties: Hart, Barren, Larue, Green, and Metcalfe; and also provides water to the Mammoth Cave area. Additionally, the District sells treated water to Munfordville Water Works, Bonnieville Water Company, Larue County Water District, Green-Taylor Water District, Horse Cave and Cave City. The Districts operates a water treatment plant that can produce four million gallons per day. On an average day the plant produces approximately 2,692,589 gallons of water, less than 67% of its' designed capacity. The Districts storage system consists of 16 tanks. The total storage capacity of the district is 4,475,000 gallons. The calculated charge for 5,000 gallons of treated water (residential usage) is currently \$18.80. The Green River Valley Water District has a total of 18 employees: one certified water treatment plant operator and five certified to operate the distribution system. The other employees provide billing and financial oversight.

### **PRIVATE DOMESTIC SYSTEMS**

About 2,800 people in Metcalfe County rely on private domestic water supplies: 2,200 on wells and 600 on other sources.

In the northwest and north-central area of Metcalfe County more than three-quarters of the drilled wells in the uplands are adequate for a domestic supply. Yields as high as 50 gpm have

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been reported from wells penetrating large solution channels. In the southern third of the county and along the low-lying areas in the East and South Fork of the Little Barren River, only a few wells yield enough water for a domestic supply.

Numerous springs with flows ranging from a few gallons per minute too 5,000 gpm are found in the county. Minimum flow generally occurs in early fall, maximum flows in late winter.

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